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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,814	04/19/2001	Shinji Tanaka	1139-01	6169

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EXAMINER

THORNTON, YVETTE C

ART UNIT PAPER NUMBER

1752

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/807,814	TANAKA ET AL.	
	Examiner	Art Unit	
	Yvette C. Thornton	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2, 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is written in reference to application number 09/807814 filed on April 19, which is a 371 of PCT JP00/05911.

Response to Amendment

1. Claim 3 has been cancelled. Claims 1-2 and 4-11 are currently pending, where 10 and 11 are newly added.
2. The amendment to the specification has been entered and fully considered. The examiner has found no evidence of new matter.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-2 and 4-11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a thermoplastic film layer, does not reasonably provide enablement for a "peelable" thermoplastic film layer. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The specification clearly teaches that suitable material for the thermoplastic film layer is selected from the group consisting of polyethylene, polypropylene, polyethylene terephthalate and polybutylene terephthalate. However, the specification does not teach that the said material is inherently peelable nor does it specify that the thermoplastic layer has to be peelable. In

fact, the specification teaches away from the film layer being peelable. The second paragraph on page 30 states, “[i]f necessary, a film stripping layer may be provided between the photosensitive resin layer and the film layer. The function of this layer is to facilitate peeling off the film layer from the photosensitive resin layer.”

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Fan et al. (US 5262275 A) with Sonia et al. (US 3,622,659 A) and Solms et al. (US 2002/00658773) cited to teach inherent properties. Fan exemplifies photosensitive element having a layer, which is sensitive to IR radiation and two types of barrier layers. An IR sensitive layer was obtained by using an IR-sensitive UV opaque film having a support. A photopolymerization layer was obtained by using a CYREL 107 PLS+ printing element. In the printing element, the photopolymerizable layer (i.e., photosensitive layer) is overcoated with an elastomeric layer which functions as one barrier layer (film stripping layer) and is further overcoated with a polyamide release layer which functions as the second barrier layer (c. 11, l. 45-61). A sheet of IR sensitive UV opaque film was sprayed with a mixture of methanol and ethanol to soften the coating. The CYREL coversheet was removed and the softened coating side of the IR sensitive film was placed on top of the release layer. This was

laminated at room temperature to squeeze out the excess solvent. The IR support was then removed from the IR sensitive layer and the element was dried. The density of the IR sensitive layer was increased by laminating additional IR sensitive films, with the coating softened onto the element four more times (c. 11, l. 62-c. 12, l. 5). Example 4 illustrates an IR layer, which is used with a single barrier layer, which is completely removed in the developer solvent. SBS, a styrene-butadiene-styrene block copolymer was pre-compounded with carbon black. An IR sensitive composition was prepared by dispersing and dissolving SBS-10phr carbon black; a tetrapolymer of methylmethacrylate/acrylonitrile/butadiene/styrene; and butyrate hydroxy toluene in methylene chloride. The coversheet was removed from a CYREL printing element and the IR sensitive composition was coated onto the release layer of the CYREL plate, which functioned as a barrier layer (i.e., film layer). The taught element of example 4 was then laser ablated. After imagewise ablating the IR sensitive layer, the element was exposed with a CYREL 3040 light source and developed. In the development step, the black and barrier layer are completely removed along with the unexposed areas of the photopolymerizable layer. An image with good relief highlight dots was obtained (c. 12, l. 60-c. 13, l. 30).

Although Fan fails to explicitly discuss the material of the barrier layer, he does teach that the layer is completely removed in the developer solvent (i.e., first type). Fan further discloses that materials, which are suitable as the first type of barrier layer includes polyamides, polyvinyl alcohol and hydroxyalkyl cellulose (c. 4, l. 65-c. 5, l. 3). Polyamide is well known in the art as a thermoplastic material (Sonia c. 4, l. 70-c. 5, l. 6) and would readily be "peelable", thereby meeting the limitations of instant claims 1-2 and 4-5.

Fan teaches that photopolymerization layer can vary over a wide range depending on the type of printing plate desired. Thin plates range from 20-50 mil (508-1270 μm), while thicker plates range from 100-250 mil (c. 4, l. 4-10). The barrier layers generally will have a thickness of 0.01-3 mils (0.25-76 μm) (c. 5, l. 44-51). Any conventional sources of actinic radiation may be used to polymerize the photopolymerizable layer. The most suitable source is a standard SYLVANIA 350 blacklight fluorescent lamp, which has a central wavelength of 354 nm (c. 9, l. 43-53).

It is the examiner's position that the CYREL printing element meets the limitations of the claimed support, photosensitive layer and film layer. The taught IR sensitive composition of example 4 meets the limitations of the claimed optical density changing layer wherein styrene-butadiene-styrene meets the limitations of a heat decomposable compound and carbon black meets the limitations of a light to heat converting substance. Although Fan fails to explicitly discuss optical density and evaporate or discoloration, it is the examiner's position that a composition comprising the taught components would readily have a change in optical density before and after exposure. Furthermore, it is well known and conventional in the art that carbon black discolors on exposure to energetic radiation (see SOLMS p. 0006).

Claim Rejections - 35 USC § 103

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fan et al. (US 5262275 A) with Sonia et al. (US 3,622,659 A) and Solms et al. (US 2002/00658773) as applied to claims 1-2, 4-5 and 7 above, and further in view of Kempf (US 4,859,551 A). Fan teaches all the limitations of the instant claims except it fails to teach and/or suggest the materials of instant claim 10 as suitable material for the taught barrier layers. Fan does

however teach that those materials that are conventionally used as release layer in flexographic printing elements are suitable as the first type of barrier layer (c. 4, l. 65-c. 5, l. 3). One of ordinary skill in the art would have been motivated to use any material, which is conventional used in the art as a release layer. Kempf teaches a process wherein a release layer is polyethylene or polypropylene (cl. 36 and 38).

Response to Arguments

8. Applicant's arguments filed May 17, 2004 have been fully considered but they are not persuasive. Applicants argue that the amendment to the present claims pertains to a peelable thermoplastic film and the barrier layer of the prior art of Fan fails is not peeled off. The examiner agrees that Fan does not teach peeling the taught barrier layer and thus withdraws the rejection of instant claims 6, 8-9 and 11 over Fan. However, instant claims 1-2, 4-5, 7 and 10 pertain to a plate, which has a peelable thermoplastic film. The said claims do not contain a step of peeling and only requires the thermoplastic film to be capable of being peeled. As discussed above, Fan discloses that materials, which are suitable as the first type of barrier layer, which is used in example 4, include polyamides, polyvinyl alcohol and hydroxyalkyl cellulose (c. 4, l. 65-c. 5, l. 3). Polyamide is well known in the art as a thermoplastic material (Sonia c. 4, l. 70-c. 5, l. 6) and would readily be "peelable", thereby meeting the limitations of instant claims 1-2 and 4-5.

9. In regard to the claim interpretation of record, the claims as written do not require an irradiation step or any other process steps and therefore the material is only required to be capable of having a change in optical density, a change in color or to evaporate. The process

limitations have not been given patentable weight and the burden shifts to the Applicant to provide evidence of an unobvious difference between the claimed product and the prior art.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday 8-6:30.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1752

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Yvette C. Thornton". The signature is fluid and cursive, with the first name "Yvette" being the most prominent part.

Yvette Clarke Thornton
Primary Examiner
Art Unit 1752

yct
August 4, 2004